



PROGRESS REPORT NO. 124

TO: Laura Buelow, U.S. Environmental Protection Agency (EPA) – via Email
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Kathryn Cerise, EPA – via Email

FROM: Kris McCaig – Teck American Incorporated (TAI)

DATE: November 4, 2016

FILE NO: 01-773180-000

RE: Upper Columbia River (UCR) Remedial Investigation/Feasibility Study
(RI/FS) - Progress Report No. 124 Month Ending October 2016

Pursuant to Paragraph 39 of the June 2, 2006 Settlement Agreement (Agreement), the following is intended to provide a summary of activities completed during the past month in compliance with the aforementioned Agreement. It is also intended to provide a brief summary of pending and on-going activities.

Phase 2 Sediment Study - Field sampling activities were completed on October 24, 2013, short-term bioassay tests (i.e., 10-day *Chironomus dilutes* and 28-day *Hyalella azteca*) were completed for all batches on April 24, 2014, long-term bioassay tests (i.e., *Chironomus dilutes* and 42-day *Hyalella azteca*) were completed for all batches on May 4, 2015, and backscatter electron microscopy (BSEM) analysis on selected samples was completed in May 2015. TAI delivered the draft data summary report (DSR) to EPA on December 18, 2015.

Chemicals of Potential Concern (COPC) Refinement Document – as required in “Resolution A” in the January 18, 2013 letter from EPA which detailed the resolution to the TAI’s dispute of EPA’s comments on the Phase 2 Sediment Study quality assurance project plan, TAI submitted the Draft COPC Refinement Document to EPA on March 31, 2015. TAI is in receipt of EPA comments dated October 7, 2015 and has reviewed and discussed the comments with EPA. It was agreed that TAI will respond to the comments and acknowledge the technical issues raised by EPA in future refinements.

Benthic Macroinvertebrate Tissue Study – EPA granted approval of the Final QAPP in a letter to TAI on April 14, 2016. Spring field sampling took place between April 26 and May 19, 2016 and TAI submitted draft preliminary field data and maps to EPA on June 3, 2016. A draft sample compositing plan was provided to EPA on June 8, 2016 and TAI held a conference call with EPA June 9, 2016 to give an overview of the compositing

plan and answer any preliminary questions. EPA provided partial comments on the compositing plan to TAI on July 1, 2016 and final comments and an addendum level of effort (LOE) guide to TAI on July 24, 2016. TAI submitted a draft QAPP Addendum No. 1 for the summer/fall field sampling to EPA on August 10, 2016. EPA provided comments to TAI on August 26, 2016 and TAI revised the document and submitted a red line strike-out version of the draft final addendum to EPA on August 31, 2016. EPA approved the Final QAPP Addendum No. 1 on September 2, 2016, all required permits were obtained by TAI and their field contractor, summer/fall field sampling commenced on September 6, 2016, and was completed on October 5, 2016. TAI revised the sample compositing plan and submitted a draft final version to EPA on October 27, 2016. At the time of writing, TAI held a conference call with EPA on November 1, 2016 to give an overview of the revised compositing plan and answer preliminary questions. At EPA's request, TAI followed up with a summary of the process used for revising the compositing plan in an email dated November 3, 2016.

Human Health – TAI received from EPA, the draft data analysis report (DAR) for the Recreational Use Survey on January 17, 2014 and submitted comments to EPA on June 11, 2014. TAI received from EPA, a November 23, 2015 Memorandum written by SRC titled "Recreation Use Survey Fish Ingestion Rate" and is reviewing and evaluating to provide comments. It is important to note that SRC's memorandum references the following version of the DAR for the recreational use survey: "SRC, Inc. (2014). Data analysis report for the recreational use survey for the Upper Columbia River Site human health risk assessment and remedial investigation/feasibility study. Prepared under contract for the Environmental Protection Agency. January 16." As noted above, TAI submitted comments to EPA on the January 2014 DAR version on June 11, 2014. EPA circulated the Draft Final DAR for review by TAI and the Participating Parties on April 15, 2016 and TAI submitted comments to EPA on June 10, 2016.

On June 27, 2016 EPA submitted the April 30, 2016 report titled "Statistical Review of a Report on Food Consumption and Resource Use among Residents of the Colville Reservation" as prepared by The Mountain-Whisper-Light Statistics for TAI to review and provide comment. TAI provided review comments to EPA on September 26, 2016.

2016 Residential Soil Sampling – EPA approved the Final Field Reconnaissance Plan on April 12, 2016; work commenced on April 26, 2016 and was completed on May 18, 2016. TAI submitted the draft final QAPP Addendum No. 1 to EPA on June 17, 2016 for review and comment and EPA responded with comments on July 14, 2016. TAI revised the QAPP Addendum and submitted to EPA on July 22 for approval; the document was approved by EPA on July 26, 2016. Field sampling was conducted during the months of August and September; TAI notified EPA in a letter dated September 26, 2016 that sampling was completed on September 25, 2016 and that samples were collected during the program at a total of 144 residences. Sample processing and analysis, and data validation activities continued during the month of October and will continue in November.

White Sturgeon Sediment Toxicity Study – In January 2014 TAI submitted to EPA, the draft final version of the Assessment of Sediment Toxicity to White Sturgeon DSR and response to EPA’s comments. On August 10, 2015 TAI met with EPA to discuss the draft final DSR and TAI’s response to comments and clarify further changes needed in order to revise the DSR. TAI submitted a revised DSR and revised response to comments to EPA on November 20, 2015.

Soil Amendment Technologies Evaluation Study – TAI is received a letter from EPA on June 21, 2016 regarding approach for conducting the evaluation study and proposed that EPA perform the treatability study with Teck’s funding. At the time of writing TAI responded to EPA’s letter on July 6, 2016 in agreement that a treatability study should be done, but is disagreeing that EPA needs to be in the lead.

Baseline Ecological Risk Assessment (BERA) – In August 2015 TAI provided draft straw man approaches for development of toxicity reference values (TRVs) for wildlife, sediment and porewater, and soil which served to initiate discussions between TAI, EPA and the participating parties (PPs). TAI received two comment letters on December 18, 2015 which detailed EPA and PP Workgroup comments on the approaches. TAI evaluated the comments and provided requested information prior to the TRV development meetings held on January 20 and 21, 2016 in Seattle, WA. During the meetings TAI presented information focused on addressing comments from EPA and the PPs, and had time for discussion between technical team members of each group. Information from the meeting (e.g., sign-in sheets, agendas, presentations, etc.) has been posted on the secure side of the project website www.ucr-rifs.com and more will be posted as it becomes available (e.g., draft meeting notes, technical papers, etc.). TAI submitted draft meeting notes to EPA on February 9, 2016 for review and approval. On June 17, 2016 EPA submitted a letter to TAI “Upper Columbia River Baseline Ecological Risk Assessment TRV Development Follow Up.” TAI is evaluating the letter and will continue to work with EPA on actions items outlined in the letter.

Analytical Support for Sturgeon Sampling Effort – TAI received a letter and attached Data Quality Objectives (DQO) document (SRC 2016) from EPA on July 22, 2016 with a requirement that TAI fund work to fill a data gap that EPA has identified for the Human Health Risk Assessment (HHRA) in the UCR RI/FS. EPA's letter directed TAI to bear the cost of processing, shipping and analyzing 48 hatchery white sturgeon fillet samples from fish caught by the CCT/STI tribe in Lake Roosevelt. In addition to generating data for the HHRA, these data may be used by Washington Department of Health in evaluating whether to issue a fish consumption advisory for UCR sturgeon. TAI responded with a letter on July 29, 2016 to inform EPA of TAI’s agreement to fund the work described in the letter; however, TAI raised important process and technical concerns. EPA provided a draft field sampling plan, draft standard operating procedures and a draft Quality Assurance Project Plan Upper Columbia River Sturgeon Tissue Study Addendum No. 1 to the Quality Assurance Project Plan for the 2009 Fish Tissue Study in August for TAI review and comment. TAI provided comments on all three documents and EPA finalized the addendum on September 29, 2016. EPA sent a letter to TAI on

September 30, 2016 with the final sample compositing approach for the 72 sturgeon fillet samples that were collected by EPA's contractor and shipped to TAI's contract laboratory during the months of August and September 2016. Samples have been processed and will be analyzed in November. TAI coordinated with EPA on schedule for delivery of the draft field summary report will review in November.

Assessment and Estimations of Upland Soils on the UCR Site – TAI is in receipt of EPA's letter of July 22, 2016 which provided formal transmittal of an EPA LOE for Assessment and Estimations of Upland Soils on the UCR site and is reviewing and evaluating the LOE. As part of the review and evaluation, TAI requested documents and data cited in the LOE from EPA and EPA has provided all documents and data requested.

Should you have any questions or require any additional information, please do not hesitate to contact me at 509-623-4501.